

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) An injector pump for pushing an aqueous injector fluid to [[a]]an injector fluid receiving location of a [[downstream injector fluid receiving]] sample fluid flow path of a sample fluid analysis device, comprising
an integral injector fluid reservoir [[for]] containing the aqueous injector fluid;
an initially dry microporous fluidic path having an injector fluid application end for accepting the injector fluid and an injector fluid effluent end for delivering the injector fluid to the receiving location,
a [[connector]] valve for selectively fluidically connecting the integral reservoir with [[connected to]] the injector fluid application end to supply the injector fluid from the integral reservoir to the application end, the fluidic path automatically filling with the injector fluid up to the effluent end upon supply of the injector fluid [[application]] to the application end;
an isolator for fluidically isolating the effluent end from the receiving location to prevent passive injector fluid flow from the effluent end into the sample fluid flow path when the fluidic path includes the injector fluid;
driving means for electro-osmotically pumping the injector fluid out of the effluent end of the fluidic path element and across the isolator to the injector fluid receiving location of the [[downstream]] sample fluid flow path[[device]]; and
a sealing element for sealing the fluidic path along a perimeter thereof to prevent flow of the injector fluid [[flow]] from the fluidic path at the perimeter during electro-osmotic pumping.
2. (Previously Presented) The injector pump of claim 1, wherein the initially dry fluidic path is made of a micro-porous material and wets up by capillary action when injector fluid is applied to the application end.
3. (Currently Amended) An injector pump for pushing an aqueous injector fluid to [[a]]an injector fluid receiving location of a [[downstream injector fluid receiving]] sample fluid flow path of a sample fluid analysis device, comprising

an integral injector fluid reservoir containing the aqueous injector fluid;

an initially dry microporous fluidic path having [[a]] an injector fluid application end for accepting the injector fluid and an injector fluid effluent end for delivering the injector fluid to the receiving location;

a valve for selectively fluidically connecting the integral reservoir with the injector fluid application end to supply the injector fluid from the integral reservoir to the application end, the fluidic path automatically filling with injector fluid up to the effluent end upon supply of the injector fluid [[application]] to the application end;

an isolator for fluidically isolating the effluent end from the receiving location to prevent passive injector fluid flow from the effluent end when the fluidic path includes injector fluid, wherein the isolator is an air gap;

driving means for electro-osmotically pumping injector fluid out of the effluent end of the fluidic path element and across the isolator to the fluid receiving location of the downstream device; and

a sealing element for sealing the fluidic path along a perimeter thereof to prevent injector fluid flow from the fluidic path at the perimeter during electro-osmotic pumping.

4. (Original) The injector pump of claim 3, wherein the fluidic path is made of a material having a surface charge and zeta potential.
5. (Previously Presented) The injector pump of claim 4, wherein the driving means is a pair of spaced apart first and second electrodes for applying an electrical potential to injector fluid in the fluidic path.
6. (Previously Presented) The injector pump of claim 5, wherein the first electrode is in electric contact with the injector fluid in the fluidic path at a first location and the second electrode is positioned at a second, spaced apart location for electrical contact with the injector fluid at the application end.
7. (Original) The injector pump of claim 6, further comprising means for electrically connecting the first and second electrodes to an electric control instrument for generating the electrical potential.

8. (Original) The injector pump of claim 7, wherein the means for electrically connecting is an electronic circuit board with contacts for electrically connecting to the control instrument and electric conductors for electrically connecting the contacts with the first and second electrodes.
9. (Original) The injector pump of claim 8, wherein the first and second electrodes are part of a flexible electrode module.
10. (Previously Presented) The injector pump of claim 2, wherein the fluidic path contains a dry reagent transportable along the micro-porous fluidic path by capillary flow when injector fluid is applied at the application end.
11. (Previously Presented) The injector pump of claim 10, wherein the dry reagent is selected from the group of luminogenic, fluorogenic, electrogenic and chemoluminescent substrates and combinations thereof.
12. (Original) The injector pump of claim 1, wherein the receiving element is selected from the group of a micro-porous lateral flow path, a pipe, a micro-reactor, and a chamber.
13. (Cancelled)
14. (Original) The injector pump of claim 6, wherein the first electrode is spaced from the effluent end to generate a field free region in the fluidic path at the effluent end during electro-osmotic pumping.
15. (Previously Presented) The injector pump of claim 14, wherein the micro-porous fluidic path contains a transportable reagent located in the field free region and transported towards the effluent end by capillary flow when the injector fluid is applied at the application end.

16. (Previously Presented) The injector pump of claim 15, wherein the transportable reagent is selected from the group of luminogenic, fluorogenic, electrogenic and chemoluminescent substrates and combinations thereof.
17. (Currently Amended) The injector pump of claim 2, wherein [[the fluid introduced into the initially dry fluidic path at its application end is supplied to the application end from an]] the injector fluid reservoir is [[an integral]] is filled with injector fluid [[reservoir]].
18. (Currently Amended) The injector pump of claim 17, wherein the integral reservoir is pressurized [[initially sealed]], and after connection to the injector fluid application end by the valve [[rupture of the seal]] releases injector fluid to the application end of the fluidic path.
19. (Currently Amended) The injector pump of claim 2, wherein the micro-porous fluidic path has pores of less than 1 micrometers radius.
20. (Currently Amended) The injector pump of claim 2, wherein the micro-porous fluidic path has pores of less than 0.2 micrometers radius.
21. (Previously Presented) The injector pump of claim 1, wherein the electro-osmotically pumped injector fluid has an electrolyte concentration of less than 10 millimolar
22. (Original) The injector pump of claim 1, wherein the fluidic path is trapezoidal shaped with its fluid application end wider than its effluent end.
23. (Previously Presented) The injector pump of claim 1, wherein the flow conductance of the injector fluid-filled fluidic path is at least 20 times less than the flow conductance of the fluid receiving device at its injector fluid receiving location.
24. (Previously Presented) The injector pump of claim 1, for supplying injector fluid to a vented air chamber included in the downstream device at the injector fluid receiving location.

25. (Currently Amended) The injector pump of claim 1, for supplying injector fluid to an enclosed air chamber included in the [[downstream]] sample analysis device at the injector fluid receiving location.
26. (Currently Amended) The injector pump of claim 25, wherein the [[fluid receiving]] sample analysis device is a micro-porous lateral flow strip with an injector fluid receiving location along its length.
27. (Original) The device of claim 26, wherein the lateral flow strip has a sample application end and an effluent end.
28. (Original) The injector pump of claim 5, for operation with an electric potential of less than 100 volts.
29. (Cancelled)
30. (Cancelled)
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81. (Currently Amended) An injector pump for pushing an aqueous injector fluid to an injector fluid receiving location of a [[downstream device in the form of]] micro-porous sample fluid flow path of a sample fluid analysis device, comprising an integral injector fluid reservoir containing the aqueous injector fluid; an initially dry fluidic path having a fluid application end for accepting the injector fluid and an effluent end for delivering the injector fluid to the receiving location, the fluidic path automatically filling with the injector fluid up to the effluent end upon injector fluid application to the application end; an isolator for fluidically isolating the effluent end from the receiving location to prevent passive injector fluid flow from the effluent end when the fluidic path includes injector fluid; driving means for electro-osmotically pumping the injector fluid out of the effluent end of the fluidic path element and across the isolator to the injector fluid receiving location of the downstream device; and

a sealing element for sealing the fluidic path along a perimeter thereof to prevent injector fluid flow from the fluidic path at the perimeter during electro-osmotic pumping.

82. (Currently Amended) An injector pump for pushing an aqueous injector fluid to [[a]] an injector fluid receiving location of a [[downstream]] sample fluid flow path of a sample fluid analysis device, comprising:

an integral injector fluid reservoir containing the aqueous injector fluid;

an initially dry fluidic path having a fluid application end for accepting the injector fluid and an effluent end for delivering the injector fluid to the receiving location, the fluidic path automatically filling with the injector fluid up to the effluent end upon injector fluid application to the application end;

a dry reagent in the fluidic path, the dry reagent being transportable along the fluidic path upon application of the injector fluid;

an isolator for fluidically isolating the effluent end from the receiving location to prevent passive injector fluid flow from the effluent end when the fluidic path includes injector fluid;

driving means for electro-osmotically pumping injector fluid out of the effluent end of the fluidic path element and across the isolator to the fluid receiving location; and

a sealing element for sealing the fluidic path along a perimeter thereof to prevent injector fluid flow from the fluidic path at the perimeter during electro-osmotic pumping.

83. (Currently Amended) An injector pump for pushing an aqueous injector fluid to [[a]] an injector fluid receiving location of a [[downstream]] sample fluid flow path of a sample fluid analysis device, comprising:

an integral injector fluid reservoir containing the aqueous injector fluid;

an initially dry fluidic path having a fluid application end for accepting the injector fluid and an effluent end for delivering the injector fluid to the receiving location, the fluidic path automatically filling with the injector fluid up to the effluent end upon injector fluid application to the application end;

an isolator for fluidically isolating the effluent end from the receiving location to prevent passive injector fluid flow from the effluent end when the fluidic path includes the injector fluid;

a pair of spaced apart first and second electrodes for applying an electrical potential to injector fluid in the fluidic path, the first electrode being in electric contact with the injector fluid in the fluidic path at a first location and the second electrode being positioned at a second, spaced apart location for electrical contact with the injector fluid at the application end; and
a sealing element for sealing the fluidic path along a perimeter thereof to prevent injector fluid flow from the fluidic path at the perimeter during electro-osmotic pumping.

84. (Currently Amended) An injector pump for pushing an aqueous injector fluid to an injector fluid receiving location of a micro-porous sample fluid lateral flow path of a sample fluid analysis device with [[an injector fluid receiving location and]] an enclosed air chamber at the receiving location, comprising:
an integral injector fluid reservoir containing the aqueous injector fluid;
an initially dry fluidic path having a fluid application end for accepting the injector fluid and an effluent end for delivering the injector fluid to the receiving location, the fluidic path automatically filling with the injector fluid up to the effluent end upon injector fluid application to the application end;
an isolator for fluidically isolating the effluent end from the receiving location to prevent passive injector fluid flow from the effluent end when the fluidic path includes injector fluid;
driving means for electro-osmotically pumping injector fluid out of the effluent end of the fluidic path element and across the isolator to the injector fluid receiving location;
and
a sealing element for sealing the fluidic path along a perimeter thereof to prevent injector fluid flow from the fluidic path at the perimeter during electro-osmotic pumping.

85. (Currently Amended) An injector pump for pushing an aqueous injector fluid to an injector fluid receiving location of a sample fluid flow path of a sample fluid analysis [[fluid receiving]] device, comprising:
an integral injector fluid reservoir containing the aqueous injector fluid;
an initially dry fluidic path having a fluid application end for accepting the injector fluid and an effluent end for delivering the injector fluid to the receiving location, the fluidic

path automatically filling with the injector fluid up to the effluent end upon injector fluid application to the application end;

an isolator for fluidically isolating the effluent end from the receiving location to prevent passive injector fluid flow from the effluent end when the fluidic path includes injector fluid;

a pair of spaced apart first and second electrodes for applying an electrical potential to injector fluid in the fluidic path for electro-osmotically pumping the injector fluid out of the effluent end of the fluidic path element and across the isolator to the injector fluid receiving location and for operation with an electric potential of less than 100 volts; and
a sealing element for sealing the fluidic path along a perimeter thereof to prevent injector fluid flow from the fluidic path at the perimeter during electro-osmotic pumping.